KOMMISSIONEN FOR DE EUROPÆISKE FÆLLESSKABER

Bruxelles, den 7.1.2005
KOM(2004) 861 endelig

MEDDELELSE FRA KOMMISSIONEN TIL EUROPA-PARLAMENTET OG RÅDET

Euratoms Sikkerhedsaktiviteter i 2003

1. INDLEDNING

Euratom-traktaten, som blev underskrevet samtidig med traktaten om Det Europæiske Økonomiske Fællesskab, er det vigtigste grundlag i Den Europæiske Unions lovgivning for Kommissionens aktiviteter inden for nuklear sikkerhed og strålingsbeskyttelse. Denne meddelelse beskriver de aktiviteter, Kommissionens GD for Transport og Energi (GD TREN) har udført på grundlag af Euratom-traktatens afsnit II, kapitel 3 og 7. Andre aktiviteter i henhold til Euratom-traktaten, f.eks. forskning, omfattes ikke af denne rapport.

2. EURATOMS SIKKERHEDSAKTIVITETERS FORMÅL, RETSGRUNDLAG OG OMFANG

2.1. SUNDHEDSBESKYTTELSE (Euratom-traktatens afsnit II, kapitel 3)

Euratoms vigtigste opgave på det område, som hører under Euratom-traktatens kapitel 3, er at fastsætte grundlæggende sikkerhedsnormer for at beskytte arbejdstagerne og befolkningen mod de farer, der er forbundet med ioniserende stråling. Kapitel 3 giver også Kommissionen udvidede beføjelser til at sikre, at disse grundlæggende sikkerhedsnormer bliver korrekt anvendt.

Domstolen[1] har udtrykkelig anerkendt Fællesskabets beføjelser til at lovgive for det nukleare sikkerhedsområde, der hører under Euratom-traktaten afsnit II, kapitel 3. Domstolen fastslog navnlig, at Fællesskabet har juridiske beføjelser til af sundhedsbeskyttelseshensyn at indføre et godkendelsessystem, som medlemsstaterne skal anvende foruden de grundlæggende normer.

2.2. Sikkerhedskontrol (Euratom-traktatens afsnit II, kapitel 7)

Kommissionens opgave inden for nuklear sikkerhed og at sikre, at nukleart materiale ikke benyttes til andet end det planlagte formål, og at de kontrolforpligtelser Fællesskabet har påtaget sig i kraft af aftaler med tredjelande eller internationale organisationer, opfyldes. Kapitel VII i Euratom-traktaten og Euratoms gennemførelsesforordning nr. 3227/76 med senere ændringer er retsgrundlaget for Euratoms sikkerhedskontrol[2].

3. OMLÆGNING

Den 16. februar 2003 blev afdelingen for strålingsbeskyttelse flyttet fra GD Miljø til GD Transport og Energi (GD TREN). Desuden blev to GD TREN-afdelinger, som beskæftiger sig med juridiske og tekniske spørgsmål og internationale forhold på det nukleare område, flyttet fra Bruxelles til Luxembourg. To af GD TREN's direktorater, Nuklear Energi (H) og Nuklear Sikkerhedskontrol (I) er nu ansvarlige for alle sikkerhedsaktiviteter, som Kommissionen udfører i henhold til Euratom-

[1] Dom i sagen C-29/99 af 10. december 2002, Sml. [2002] I-11221.

[2] Nærmere enkeltheder findes i KOM(2001) 436 endelig udg., kapitel 2 og 3.

traktaten, herunder også dem, der hørte under det tidligere Europæiske Kontor for Sikkerhedskontrol (ESO).

4. SUNDHEDSBESKYTTELSE - NUKLEAR SIKKERHED

4.1. Den nukleare pakke

Den 30. januar 2003 vedtog Kommissionen to forslag til rådsdirektiver om henholdsvis nuklear sikkerhed og forvaltning af radioaktivt affald efter at have rådført sig med Artikel 31-Gruppen og Det Europæiske Økonomiske og Sociale Udvalg.

Det første direktivforslag,[3] som fastsætter de grundlæggende forpligtelser og generelle principper for sikkerheden på nukleare anlæg, går ud på at sikre, at der sørges for sundhedsbeskyttelse mod ioniserende stråling i hele det nukleare anlægs levetid - lige fra opførelsen til den endelige nedlukning. Direktivet går ud fra de grundlæggende forpligtelser og generelle principper i de relevante internationale konventioner og giver dem retskraft i Fællesskabet. For at sikre ordningens troværdighed indfører forslaget en ordning, hvorefter sikkerhedsmyndighederne fra andre medlemsstater foretager en ekspertbedømmelse. Dette initiativ søger også at sikre, at der er tilstrækkelige finansielle ressourcer til at dække omkostningerne i forbindelse med nedlukning af nukleare anlæg.

Formålet med det andet direktivforslag,[4] som drejer sig om behandlingen af brugt nukleart brændsel og radioaktivt affald er at forpligte medlemsstaterne til at indføre nationale programmer for behandling af radioaktivt affald, at fastsætte fælles frister for bortskaffelse af radioaktivt affald og at prioritere løsningen med deponering i dybtliggende geologiske formationer. Forslaget søger også at fremme medlemsstaternes samarbejde om forskning og teknologisk udvikling i forbindelse med behandling af brugt brændsel og bortskaffelse af radioaktivt affald.

Direktivforslagene blev den 2. maj 2003 sendt til Rådet, som i overensstemmelse med Euratom-traktaten forelagde dem for Europa-Parlamentet. Rådets drøftelser af forslagene, der også fik bidrag fra Europa-Parlamentet, førte til ændring af dokumenterne.

4.2. Tilsynsmyndighedernes arbejdsgrupper

CONCERT-gruppen og de nukleare tilsynsmyndigheders arbejdsgruppe (NRWG) består af højtstående repræsentanter for de nukleare tilsynsmyndigheder i Den Europæiske Union, Central- og Østeuropa og den tidligere Sovjetunion. i 2003 blev en række dokumenter, der drejede sig om tidlig lukning af kernekraftværker, ikke-destruktiv prøvning af nukleare komponenter og økonomiske forskrifters betydning for den nukleare industri, drøftet og færdiggjort.

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[3] KOM(2003) 32 endelig udg.
[4] KOM(2003) 32, endelig udg.

4.3. Radioaktiv affald og nedlukning

I april 2003 offentliggjorde Kommissionen den 5. situationsrapport om forvaltning af radioaktivt affald i Den Europæiske Union, som beskrev situationen i det udvidede EU. Rapporten viser som et af de vigtigste resultater, at affaldsproduktionen fortsat falder på grund af affaldsbegrænsende foranstaltninger inden for de lavaktive kategorier.

I forbindelse med nedlukning har GD TREN øget sin deltagelse i de internationale nedlukningsfonde (IDF) forud for sin overtagelse af ansvaret for forvaltning af midlerne til Ignalina i Litauen og Bohunice i Slovakiet efter udvidelsen i maj 2004.

GD TREN har også fortsat deltaget i arbejdet i en række internationale organisationer og komitéer (især IAEA og OECD/NEA), som beskæftiger sig med radioaktivt affald og nedlukning. Her har arbejdet med sikkerhedskrav til deponering af radioaktivt affald i geologiske formationer været særlig vigtigt.

4.4. Radioaktiv transport og SURE-programmet

Den vigtigste aktivitet i 2003 var udarbejdelsen af den stående arbejdsgruppes (SAG) femte rapport om transport af radioaktive materialer og udarbejdelsen af en meddelelse til Europa-Parlamentet og Rådet på grundlag af denne rapport. Rapportens formål er at beskrive situationen i forbindelse med transport af radioaktivt materiale i EU, påvise eventuelle særlige problemer og om nødvendigt foreslå foranstaltninger, der kan forbedre sektorens virksomhed og øge sikkerhedsniveauet.

Desuden blev der gennemgået tre afsluttende rapporter, som drejede sig om statistikker over nukleare transporter, forbedring af IAEA's transportbestemmelser for LSA/SCO-materialer og vurdering af sikkerhedsdata for nuklear kritikalitet og grænserne for aktinider i transport. Også to foreløbige rapporter om attesteringsmetoderne i medlemsstaterne og tiltrædelseslandene og om aerosolbåret udslip af radioaktivt materiale ved transportulykker blev taget op til behandling.

5. SUNDHEDSBESKYTTELSE - STRÅLINGSBESKYTTELSE

5.1. Den generelle udvikling

Det samvirke, som opstår ved, at afdelingen for strålingsbeskyttelse flyttes fra GD ENV til GD TREN, forventes at frigøre ressourcer. Mens der i 2003 kun blev foretaget én kontrol i henhold til artikel 35, blev der i 2004 truffet foranstaltninger til at udføre et omfattende kontrolprogram.

Selv om lovgivningsprogrammet har været udsat for en vis forsinkelse, lykkedes det dog Kommissionen at få to vigtige retsakter vedtaget ved årets slutning. Det drejer sig om Kommissionens henstilling om standardiserede oplysninger om udslip fra nukleare anlæg[5], og Rådets direktiv om kontrol med lukkede højaktive strålekilder[6].

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5 EUT L 2 af 6.1.2004, s. 36.

6 EUT L 246 af 31.12.2003, s. 57.

5.2. Gennemførelse af lovgivning

Omsætning til medlemsstaternes lovgivning

Korrekt og fuldstændig gennemførelse af Fællesskabets lovgivning blev sikret med de hjælpemidler, Euratom-traktaten fastsætter, nemlig henstillinger, kontrol, udtalelser og overtrædelsesprocedurer. Særlig opmærksomhed gjaldt gennemførelsen af de seneste direktiver om grundlæggende sikkerhedsnormer[7] og medicinsk bestråling,[8] som skulle omsættes til national lovgivning inden den 13. maj 2000.

Traktatens artikel 33 pålægger medlemsstaterne at forelægge nationale lovforslag for Kommissionen. Kommissionen har modtaget fire sådanne forslag, som i to tilfælde har givet den anledning til bemærkninger. Kommissionen har i 11 tilfælde afgivet udtalelse om planer for bortskaffelse af radioaktivt affald, som blev forelagt i henhold til artikel 37. På grundlag af artikel 141 blev der indledt i alt 26 overtrædelsesprocedurer. Kommissionen besluttede at indbringe to sager i forbindelse med artikel 37 og direktivet om oplysninger til offentligheden for Domstolen. I alt blev 10 sager afsluttet, og i to af dem fastslog Domstolen, at den pågældende medlemsstat havde undladt at give meddelelse om foranstaltningerne for omsætning af direktivet om grundlæggende sikkerhedsnormer og direktivet om medicinsk bestråling til national lovgivning. Pr. 31 december 2003 var 16 overtrædelsessager stadig i gang.

5.3. Praktisk vejledning

Praktisk vejledning i anvendelse af de grundlæggende normer for beskyttelse af arbejdstagernes og offentlighedens sundhed mod farerne fra ioniserende stråling gives af den videnskabelige ekspertgruppe, der omtales i Euratom-traktatens artikel 31. I 2003 godkendte gruppen et dokumentudkast om dosisbegrænsning. Den endelige vedtagelse forventes i 2004. Et videnskabeligt seminar, som blev afholdt af Kommissionen, førte til enighed om de fremtidige foranstaltninger for erhvervsbetinget overdosis inden for det medicinske område og om eventuel øget risiko ved nye teknologier inden for medicin.

Andre initiativer drejede sig om flybesætningers udsættelse for stråling (EURADOS-projektet), en europæisk oversigt over erhvervsbetinget bestråling (ESOREX 2000), vurdering af gennemførelsen af direktivet om strålingsbeskyttelse af eksterne arbejdstagere og om iværksættelsen af et europæisk uddannelsesprogram.

5.4. Lovgivningens udvikling

Et rådsdirektiv om kontrol med lukkede højaktive strålekilder og ukontrollerede strålekilder (LHS-direktivet) blev vedtaget i december 2003[9]. Direktivet fastsætter, at tilladelse til enhver aktivitet, hvori der indgår en højaktiv strålekilde, kræver

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7 Rådets direktiv 96/29/Euratom af 13. maj 1996 om fastsættelse af grundlæggende sikkerhedsnormer til beskyttelse af befolkningens og arbejdstagernes sundhed mod de farer, som er forbundet med ioniserende stråling, EFT L 159 af 29.6.1996, s. 1.

8 Rådets direktiv 97/43/Euratom af 30. juni 1997 om beskyttelse af personers sundhed mod faren ved ioniserende stråling i forbindelse med medicinsk bestråling, direktiv 180/466/Euratom EFT L 180 af 9.7.1997, s. 22.

9 Rådets direktiv 2003/122/Euratom, EFT L 346 af 31.12.2003, s. 57.

forudgående undersøgelse for at sikre, at der er truffet foranstaltninger ikke blot for sikker anvendelse af kilden, men også for rigtig behandling af den, når den ikke længere benyttes. Direktivet indeholder også bestemmelser om registrering, opbevaring og overflytning af strålekilder og om ansvaret for "ukontrollerede" kilder.

Til vejledningsformål udsendte Kommissionen to henstillinger om de radiologiske følger af Tjernobyl-ulykken[10] og om standardiserede oplysninger om radioaktive udslip til miljøet fra kernekraftværker og oparbejdningsanlæg[11].

Efter Domstolens dom af 10. december 2002 om Euratoms beføjelser inden for strålingsbeskyttelse vedtog Rådet en afgørelse om ændring af ordlyden i Euratoms kompetenceerklæring i henhold til artikel 30, stk. 4, nr. (iii), i konventionen om nuklear sikkerhed[12].

5.5. Katastrofeberedskab

Afdelingen for strålingsbeskyttelse har en 24 timers vagttjeneste, kendt som ECURIE, for at kunne iværksætte udveksling af oplysninger i tilfælde af en strålingsulykke. Der blev foretaget tekniske forbedringer af ECURIE's kommunikationssystemer, og der blev foretaget regelmæssige afprøvninger.

For at kunne opnå øjeblikkelig reaktion i katastrofetilfælde har ECURIE-systemet direkte forbindelser med overvågnings- og informationscentret (OIC), som forestås af GD ENV inden for rammerne af Fællesskabets civilbeskyttelsesordning.

I maj blev der afholdt et ECURIE-uddannelseskursus for tiltrædelses- og kandidatlandene. Bulgarien, Ungarn og Litauen tilsluttede sig formelt ECURIE-systemet i efteråret. Andre tiltrædelses- og kandidatlande er blevet inddraget i ECURIE og forbereder medlemskab, selv om den tekniske gennemførelse af ECURIE-kommunikationssystemet i nogle tiltrædelseslande ikke er gået så glat som ventet.

6. SUNDHEDSBESKYTTELSE - ANSVARET FOR NUKLEARE SKADER

Paris-konventionen af 29. juli 1960 om ansvar over for tredjemand på den nukleare energis område indeholder bestemmelser om det erstatningsansvar over for tredjemand, som påhviler nukleare anlægs driftsledere, og om reglerne for erstatning i tilfælde af nukleare ulykker. En ændringsprotokol fastsætter en mere end tredivedobbelt forhøjelse af det erstatningsbeløb, det nukleare anlægs driftsleder skal afholde, idet det er blevet forhøjet til mindst 700 mio. EUR. Den udvider også

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10 Kommissionens henstilling 2003/274/Euratom af 14. april 2003 om beskyttelse og information af offentligheden med hensyn til eksponering for vedvarende radioaktiv cæsiumforurening i visse vilde fødevareprodukter som følge af ulykken på kernekraftværket i Tjernobyl, EFT L 99 af 17.4.2003, s. 55.

11 Kommissionens henstilling 2004/2/Euratom af 18. december 2003 om standardiserede oplysninger vedrørende radioaktive luftbårne og flydende udslip til miljøet fra nukleare kraftværker og oparbejdningsanlæg ved normal drift, EFT L 2 af 6.1.2004, s. 36.

12 Vedtaget den 15.12.2003. Se også Kommissionens afgørelse 2004/491/Euratom af 29.4.2004, L 172 af 6.5.2004, s. 7.

konventionens geografiske anvendelsesområde, så der kan gives erstatning til ofre i stater, som ikke er parter i konventionen, og den udvider det materielle anvendelsesområde til miljøskader og til omkostningerne ved sikkerhedskontrol. Da ændringsprotokollen berører Fællesskabets jurisdiktionsbestemmelser skulle underskrivelses- og ratifikationsprocessen vedtages af Rådet og drøftes i Europa-Parlamentet, hvilket skete i 2003.

7. NUKLEAR SIKKERHED – EURATOMS SIKKERHEDSKONTROL

7.1. Den generelle udvikling

I 2002 vedtog Kommissionen en ny opgavebeskrivelse for de afdelinger, der udfører dens kontrolopgaver i forbindelse med sikkerhed ("Euratoms sikkerhedskontrol"), og bad de pågældende direktorater om at omlægge deres overvågningsmetoder efter anlægstype og ændre deres inspektionsprocedurer i overensstemmelse hermed. Kommissionen udpegede også en gruppe for videnskabelig rådgivning om Euratoms sikkerhedskontrol (SAGES), som skulle give ekspertråd. I 2003 blev der på fælles møder mellem SAGES og Kommissionens repræsentanter drøftet ændrede metoder for en række anlægstyper samt en overordnet strategi. Forslagene er en omlægning i forhold til den traditionelle sikkerhedskontrol. Begreber som tidsfaktoren får en mindre rolle end tidligere. Der vil blive lagt større vægt på at sikre, at driftsledelsen i tilstrækkelig grad kontrollerer og overvåger nukleart materiale, som er i dens besiddelse. Teknikker, der benyttes uden for sikkerhedskontrollen, f.eks. systemrevision, vil blive indført. Omfang og tidsplanlægning af Kommissionens kontrol vil blive mindre forudsigelig for driftslederne. Inspektionerne vil blive planlagt, så der tages hensyn til det indbyrdes forhold mellem de forskellige stadier i den nukleare brændselscyklus.

Drøftelserne af forslaget til den nye forordning om sikkerhedskontrol (KOM(2002) 99), der drejer sig om den tekniske udvikling inden for sikkerhedskontrol og skal udgøre retsgrundlaget for gennemførelse af tillægsprotokollerne til kontrolaftalerne med IAEA blev videreført i Rådets atomgruppe (AG). Drøftelserne førte til en række forklaringer, forståelser og aftaler mellem Kommissionen og medlemsstaternes delegationer, som blev samlet i et dokument med titlen "retningslinjer for anvendelse af KOM(2002) 99", der vil blive offentliggjort i form af en henstilling fra Kommissionen og give driftslederne en uforpligtende vejledning. Rådet forventes at godkende forordningen i begyndelsen af 2004.

Der blev afholdt bilaterale møder med de pågældende medlemsstater for at drøfte spørgsmål i forbindelse med den reviderede forordnings bestemmelser om affald og enkelthederne i gennemførelsen af TP. Samtlige medlemsstater blev indbudt til et møde i Luxembourg i december 2003 for at drøfte gennemførelsesspørgsmålene, ikke mindst de områder, der er fælles for Euratoms og IAEA's opgaver på de nukleare anlæg i Europa. De positive tilbagemeldinger tyder på, at sådanne møder også kunne være nyttige i fremtiden, og det planlægges derfor at afholde et eller to om året for eftertiden.

De nøjagtige resultater af kvalitetsundersøgelsen af Euratoms sikkerhedskontrol i 2002 findes i bilag 1. Driftslederne gav i det store og hele udtryk for deres tilfredshed

med situationen og med Euratoms sikkerhedskontrols udførelse af sine opgaver på deres anlæg.

Arbejdet med udvikling og gennemførelse af nye sikkerhedskontrolteknikker blev videreført. Nærmere enkeltheder findes i bilag 2.

I betragtning af EU's kommende udvidelse blev der lagt særlig vægt på forberedende arbejde for hurtigt at kunne iværksætte kontrolinspektioner i disse lande. Den nukleare industri i tiltrædelseslandene er for det meste begrænset til kraftreaktorer og oplagringsanlæg. Der blev foretaget rejser til de enkelte lande for at skabe arbejdskontakter og forklare meningen med det fremtidige inspektionsarbejde. En udvidelsesarbejdsgruppe mødtes i november med repræsentanter for IAEA for at forberede fremtidige inspektionsaktiviteter. Et program for saglige undersøgelser og tekniske opgaver blev opstillet og vil blive udført i første kvartal 2004.

7.2. Sikkerhedskontrolaktiviteter

De nukleare anlægs driftsledere opgav deres beholdninger af nukleart materiale og materialebevægelserne til Kommissionen. Over 1 mio. regnskabsposteringer blev modtaget i årets løb, i de fleste tilfælde ad elektronisk vej. Alle data blev kontrolleret med henblik på intern og ekstern overensstemmelse (transit matching) og overensstemmelse med bestemmelserne i samarbejdsaftalerne med tredjelande. Alle fejl og uoverensstemmelser blev fundet og rettet efter samråd med de pågældende driftsledere. Der blev også sendt regnskabsberetninger til IAEA for at opfylde EU's forpligtelser i henhold til kontrolaftalerne med IAEA.

I 2003 udgjorde de inspektioner, som blev foretaget af Kommissionens sikkerhedsinspektører, 6 366 inspektions-manddage, dvs. næsten 13% mindre end i 2002. Denne nedgang skyldes fortrinsvis yderligere tilpasning og prioritering af inspektionsaktiviteterne. De vigtigste problemer og/eller resultater i forbindelse med inspektionsaktiviteterne for hver enkelt af de kontrollerede anlægstyper er i korthed gengivet i bilag 3.

Som resultat af Euratoms kontrolaktiviteter i henhold til Euratom-traktatens kapitel 7 blev der ikke fundet tegn på, at nukleart materiale var blevet benyttet til andet end det oprindelige formål. Der var heller ingen tegn på, at særlige kontrolforpligtelser, som Fællesskabet havde påtaget sig efter aftale med tredjelande, ikke var blevet opfyldt.

8. NUKLEAR SIKKERHED - SAMARBEJDE MED IAEA

Kommissionen samarbejder med Den Internationale Atomenergiorganisation (IAEA), der er ansvarlig for sikkerhedskontrollen på verdensplan ifølge ikke-spredningstraktaten, som alle Den Europæiske Unions medlemsstater har tilsluttet sig. Nærmere enkeltheder om dette samarbejde findes i bilag 4.

9. NUKLEAR SIKKERHED - ILLEGAL HANDEL

Kommissionen har fortsat deltaget aktivt i det arbejde, der udføres af ikke-spredningsekspertgruppen (NPEG) under G8's internationale tekniske arbejdsgruppe

vedrørende smugling af nukleare materialer (ITWG). Der forekom tre tilfælde af illegal handel med nukleart materiale i Den Europæiske Union i 2003, og de drejede sig om afskærmningssystemer af forarmet uran og artikler, der indeholdt thorium. Desuden var der 10 tilfælde af illegal handel med radioaktive kilder.

10. NUKLEAR SIKKERHED - SAMARBEJDE MED ANDRE REGIONALE ORGANISATIONER

Som led i "energidialogen" mellem EU og Rusland blev den fjerde udviklingsrapport fremlagt på topmødet mellem EU og Rusland i Rom i november 2003 i overværelse af Romano Prodi og Vladimir Putin. Rapporten indeholdt en erklæring om, at EU og Rusland vil opstille et samarbejdsprogram for regnskab og kontrol med nukleart materiale for at skabe et mere snævert samarbejde om nuklear sikkerhed. Kommissionens nukleare sikkerhedseksperter har ført indledende drøftelser med deres russiske kolleger for at opstille et fælles samarbejdsprogram. Der er allerede blevet udarbejdet et arbejdsprogram, som bl.a. fastlægger inspektionsprocedurerne for oparbejdnings- og brændselsfremstillingsanlæg, fælles udvikling af computersystemer til opfølgning af indeslutningen af nukelart materiale og lignende hjælpemidler til databehandling inden for sikkerhedskontrol, fælles uddannelsesprogrammer og tilrettelæggelse af konferencer i Rusland om nuklear sikkerhed.

11. NUKLEAR SIKKERHED - FYSISK BESKYTTELSE

Euratom er part i konventionen af 1979 om fysisk beskyttelse af nukleare materialer (KFBNM), der fortrinsvis drejer sig om fysisk beskyttelse af nukleare materialer under international transport. I marts 2003 færdiggjorde en særlig arbejdsgruppe en rapport, der foreslog en ændring for at stramme konventionens bestemmelser. Den foreslåede ændring skulle styrke den fysiske beskyttelsesordning ved at udvide konventionens anvendelsesområde til også at omfatte nukleart materiale under indenlandsk anvendelse, oplagring og transport samt beskyttelse af anlæggene mod sabotage. Den foreslåede ændring bekræfter, at hovedansvaret for fysisk beskyttelse påhviler den enkelte stat. Desuden foreslås det at indføre en juridisk forpligtelse til at benytte de målsætninger og principper for fysisk beskyttelse, IAEA's styrelsesråd har godkendt. Der var i slutningen af 2003 endnu ikke truffet beslutning om nogen ændringskonference.

12. INTERNATIONALT SAMARBEJDE

I 2003 blev aftalerne om nukleart samarbejde med USA, Canada og Australien iværksat til alle parters tilfredshed. Bilaterale aftaler mellem Kommissionen og henholdsvis Canada og USA bekræftede det gode forhold mellem parterne.

Aftaleforhandlingerne med Japan og Kina har gjort visse fremskridt. Selv om aftalen med Japan ikke kunne indgås på grund af vanskeligheder med proceduren for forslagets godkendelse i Japan, er der imidlertid håb om, at der kan opnås enighed om en kompromistekst i 2004. Kommissionens mandat fra Rådet til at forhandle en nuklear samarbejdsaftale med Kina er blevet vedtaget, og forhandlingerne vil blive indledt i den nærmeste fremtid.

13. RESSOURCER

Euratom-traktatens artikel 174 nævner udtrykkeligt, at Kommissionens budget skal afsætte bevillinger til driftsudgifterne i forbindelse med nuklear sikkerhedskontrol. I 2003 var de særlige aktionsbevillinger på EU's budget til Euratoms sikkerhedskontrol på 18,8 mio. EUR. Heraf blev 13 mio. EUR (70%) faktisk forpligtet. Nærmere enkeltheder findes i bilag 5.

I slutningen af 2003 var et personale på i alt 302 ansatte beskæftiget med nuklear sikkerhed, heraf var 182 nukleare inspektører. Nærmere enkeltheder om personaleressourcerne og deres udnyttelse findes i bilag 5.

14. GENERELLE KONKLUSIONER

2003 var et vigtigt år for omlægningen af Kommissionens aktiviteter på det nukleare område, og resultatet forventes at blive et omfattende praktisk samvirke, som f.eks. vil sætte Kommissionen i stand til at øge antallet af inspektioner på medlemsstaternes nukleare anlæg.

Lovgivningspakken vil, når den bliver vedtaget, som årets vigtigste lovgivningsinitiativ føre til ensartede sikkerhedsstandarder af højt niveau på de nukleare anlæg i hele det udvidede EU og sikre, at der tages tilstrækkelige forholdsregler i forbindelse med nedlukning af nukleare anlæg og behandling af brugt brændsel og radioaktivt affald. Vedtagelsen af direktivet om kontrol med lukkede højaktive strålekilder vil bidrage til at sikre, at potentielt skadelige kilder registreres, behandles og bortskaffes korrekt. Kommissionen har også aktivt søgt at sikre, at medlemsstaterne omsætter Fællesskabets lovgivning til national lovgivning korrekt.

Kommissionen har deltaget aktivt i internationale fora, som beskæftiger sig med nuklear sikkerhed, affaldsbehandling, sikkerhedskontrol, strålingsbeskyttelse og radioaktive transporter. Den har fortsat været en af de vigtigste deltagere i Fællesskabets ordninger for indsats i tilfælde af større strålingskatastrofer.

Hvad Euratoms sikkerhedskontrol angår, har Kommissionen gjort gode fremskridt med den praktiske udførelse af den nye opgavebeskrivelse. En ændring af forordningen om sikkerhedskontrol rykkede nærmere under drøftelserne med Rådet. Kommissionen gjorde også gode fremskridt med de praktiske forberedelser til gennemførelsen af tillægsprotokollen. En undersøgelse af driftsledernes opfattelse af Euratoms sikkerhedskontrol viste, at de i det store og hele var tilfredse med den måde, hvorpå Kommissionen udfører kontrollen.

På grundlag af inspektionerne og vurdering af regnskaberne fra indehaverne af nukleart materiale blev der ikke fundet tegn på, at nukleare materialer var blevet anvendt til andet end de oprindelige formål, brugerne i Den Europæiske Union havde opgivet i 2003. Der var heller ingen tegn på, at kontrolbestemmelserne i internationale aftaler ikke blev overholdt. Statistiske vurderinger af regnskabsberetningerne viser, at alle de store anlægs systemer for regnskab med nukleart materiale opfylder de internationale standarder.

Det arbejde, som er blevet udført i 2003, danner et solidt grundlag for, at TREN kan videreudvikle sine aktiviteter på det nukleare område. De vil medvirke til, at kernekraftmuligheden holdes åben, og kan således føre til en bæredygtig energisammensætning, mindre afhængighed af energiimport og miljøbeskyttelse i kraft af en formindskelse af de samlede CO2-emissioner.

ANNEXES

ANNEX 1

Euratom Safeguards Performance – Detailed evaluation of the survey of operators 2002

The survey contained 29 questions, divided into five groups (general safeguards issues, transmission of data to Euratom Safeguards, quality of Euratom Safeguards' information on inspections, evaluation of inspection issues, and wider issues).

A total of 72 questionnaires were sent to all the major nuclear installations as well as to a representative sample of all the other nuclear installations in the European Union (EU). 84% of the questionnaires were returned and between 82% and 100% of the individual questions were answered. Thus, the size of the response permits conclusions to be drawn about the image and performance of the Euratom Safeguards authorities. Overall, operators noted their satisfaction concerning the image and the performance of Euratom Safeguards in their installations.

The costs to the operators of a safeguards infrastructure to meet Euratom requirements compared to the costs of meeting other statutory obligations were felt to be not very high.

Operators expressed reservations concerning remote transmission of real-time accountancy data, surveillance images, and non-destructive assay results from their facilities to Euratom Safeguards headquarters in Luxembourg.

With regard to the quality of information on inspections, operators appear to be very satisfied with communication with Euratom Safeguards inspectors during inspections, and most operators welcome the follow-up letters sent after inspections. Nonetheless, the evaluation indicated that communication channels outside inspections need to be improved.

Regarding the evaluation of inspection issues, the answers revealed that the majority of operators of power reactors, enrichment plants and reprocessing plants are not satisfied with coordination/cooperation between Euratom Safeguards and the International Atomic Energy Agency (IAEA). This is an important finding which needs to be followed up. On the other hand, there is reasonably good continuity in the approaches followed during two consecutive inspections conducted by Euratom Safeguards inspectors. The replies concerning the professional abilities of Euratom inspectors confirmed their knowledge and thorough understanding of their working environment.

The balance between cost and effectiveness in the way in which inspections are organised and conducted is rated as medium. However, operators did not suggest measures to increase the effectiveness and efficiency of inspections, nor did they identify ways to improve the balance between cost and effectiveness. Most operators were not very enthusiastic about providing more support to Euratom Safeguards in exchange for a less intrusive inspector presence.

As to the wider framework, operators were opposed to the inclusion of safety, security, physical protection, and radiological protection in the tasks of the Euratom Safeguards inspectors. The views were somewhat divided on the question of whether or not the Euratom Safeguards system contributes to improving the quality of the nuclear accountancy system, the commercial relations/image, and the quality control system of the operators. The consensus view was that two to three years would be a suitable interval between future quality surveys.

ANNEX 2

Progress in Safeguards Technology

In 2003, work continued on the development and implementation of new safeguards technologies including the new digital surveillance systems. These systems have motion detection and image data treatment applications already incorporated in the delivered systems. These advanced features provide valuable assistance and they save time when viewing or reviewing images. The installation of one of these units at the Trillo nuclear power plant (Spain) was the first in the presence of the IAEA. This was an important step on the path to approval of the equipment for routine use by the IAEA.

With regard to existing equipment, development work has continued on the improvement of hand-held instruments and associated software for measuring gamma radiation.

A special instrument for the measurement of fresh, highly enriched fuel elements was developed in 2003 and installed at the FRM2 reactor in Munich.

In terms of new equipment, the Commission participated in a demonstration of a Digital Cerenkov Device for viewing irradiated nuclear fuel stored under water at the Ringhals power plant in Sweden. The device has the potential to view irradiated fuel with a cooling time in excess of 20 years or a low burn-up.

The Commission has also been exploring the possibility of using Virtual Private Networks over the telephone network to provide a secure means of data transmission. Following a workshop held in Luxembourg in March 2003 the requirements and boundary conditions were established for secure data transmission from nuclear sites to Luxembourg.

ANNEX 3

Euratom Safeguards: Detailed inspection findings

In 2003 inspection activities conducted by Commission Safeguards inspectors amounted to 6366 person-inspection days, down by almost 13% in comparison with 2002. This fall mainly resulted from further streamlining and prioritisation of inspection activities.

The main concerns and/or results achieved in the course of the inspection activities for each type of installations under control are summarised below.

Reprocessing facilities[13]

The nuclear fuel reprocessing installations at THORP, Sellafield, UK, and at UP2/UP3, La Hague, France are characterised by their high throughput[14], automation, and limited access to the process areas. The current safeguards approach for these plants comprises high frequency inspections and automated unattended instrumentation to verify the nuclear material flow, a significant part of which is plutonium. Both sites have on-site laboratories, operated by analysts from DG JRC-ITU, in which verification measurements are performed.

THORP was in normal production mode throughout 2003 with the exception of a planned shutdown during the months of October and November. Investigations continued on the apparent bias of the operator's input sample results from 2001 with particular emphasis on the calibration of the material used for verification of input solutions. The annual Physical Inventory and the Material Balance presented by BNFL were accepted.

Apart from a few short technical shut-down periods, the **Magnox reprocessing facilities** at Sellafield were in operation at a high throughput during the year. The first plutonium was introduced in the new Store 9 Extension in November 2002. Verification activities in these plants and in other Magnox related facilities on the Sellafield site were satisfactorily concluded. Some reservations however, had to be made in respect of some old plutonium stores where access is restricted due to radiological conditions, as well as in respect of some very old plants being decommissioned.

The UP2/800 reprocessing plant was in operation during the whole of 2003. Efforts were made to optimise inspection activities. In particular, a revised safeguards approach was successfully tested in the irradiated fuel storage ponds; this will halve the inspection manpower needed to safeguard these ponds. The annual physical inventory verifications were successful in the plutonium stores. With respect to the UP2/800 chemical process, the verifications performed confirmed a problem concerning high values of Material Unaccounted For (MUF) for uranium and uranium 235 which had already been detected in 2002. The issue is still under investigation by COGEMA. The cumulative "Shipper-Receiver Difference" declarations for the unit for recycling of aged separated plutonium are higher than expected and might represent a new problem. This issue is also being examined by COGEMA.

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13 At reprocessing plants, irradiated fuel assemblies received from power reactors are processed chemically to separate uranium and plutonium from the highly radioactive fission products. The separated nuclear materials can be re-introduced into the fuel cycle.

14 The total annual throughput of these three facilities adds up to over 3000 tonnes of fuel containing more than 20 tonnes of plutonium.

The **UP3** reprocessing plant was in operation from January to December 2003. The annual physical inventory carried out in August 2003 was satisfactorily completed. The installed instrumentation to verify the plutonium product input and output was upgraded and updated satisfactorily. The operator announced the start of reprocessing of research reactor fuel in 2005; this will have an impact on the safeguards strategy for the plant as it will involve handling highly enriched uranium.

Enrichment facilities[15]

At the three **Urenco centrifuge enrichment plants** at Almelo (NL), Gronau (D) and Capenhurst (UK), sample taking for subsequent High Performance Trace Analysis (HPTA) is now routinely used to confirm that only low-enriched uranium is produced. The analysis of the samples started in 2003.

Meetings were held between Urenco, the Member States involved, the IAEA and the European Commission to prepare for the implementation of the Additional Protocol in the Urenco plants at Almelo, Gronau and Jülich (D).

The diffusion enrichment plant, **Eurodif Production** at Pierrelatte, France, was subjected to weekly import and export verifications throughout 2003. The operator cooperated with the Commission's request concerning the presentation of product for verification and sealing before export from the European Union.

The annual inventory verification was carried out in the first week of February 2003. Additional verification activities in two other installations were required before the annual inventory verification could be successfully concluded.

Constraints placed by France on the inspectors due to the "*particular status*"[16] of the installation remain in force, which create unsatisfactory verification conditions.

Within the limits set by these constraints, no evidence of diversion of nuclear material under safeguards was found.

Installations for the Fabrication of Mixed Oxide Fuels (MOX)[17]

At the **Belgonucléaire MOX fuel fabrication plant** at Dessel, Belgium, there is an apparent trend in the cumulative MUF. Although the individual MUF figure for the year 2003 was statistically acceptable, the quantities of nuclear material established during all recent annual physical inventory takings were systematically higher than the declared book figures. The operator is conducting a joint investigation with DG TREN to identify the possible cause for this trend.

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15 Modern Light Water Reactors need fuel with about 3 to 5 percent of the fissionable uranium isotope U235. As natural uranium contains only 0.7 percent of this nuclide, an enrichment process is needed to achieve the desired concentration. In the European Union, two companies offer this service for civil customers: URENCO and EURODIF.

16 Due to the presence of material not under safeguards in the material balance area of EURODIF Production S.A.

17 In MOX Fuel Fabrication Plans, the plutonium oxide produced in reprocessing installations is used in a mixture with uranium oxide to fabricate MOX fuel elements for subsequent use in nuclear power plants.

Active commissioning of the **Sellafield MOX Plant (SMP)** in the UK continued. However, operational problems caused production delays throughout the year. These problems were one of the causes of the higher than expected MUF. The operator has started remedial work and has planned improvements of the concerned systems. Progress has been made in discussions with the operator and UK national authorities on data transfer to Luxembourg for evaluation.

The decommissioning of the **Siemens Mixed Oxide fuel fabrication plant** in Hanau, Germany is progressing well and is expected to lead to a reduction of the inspection frequency there in 2004.

The results of the annual Physical Inventory Verification (PIV) at the **COGEMA MOX fabrication plant** at Cadarache in France were not entirely satisfactory owing to the high values of MUF. There is, however, no evidence that safeguarded nuclear material has been diverted from its intended use. The operator has made a commitment to re-measure all materials identified as being a potential source of the discrepancies.

LEU and HEU Fuel Fabrication Plants, Conversion Facilities[18]

At **BNFL Springfields in the** UK, a large natural and low-enriched uranium conversion and fuel fabrication plant, the annual Physical Inventory Verification revealed shortcomings in the stocktaking arrangements for a limited area of the plant. A task force was set up by the operator to improve the nuclear material management.

At **Fabbricazione Nucleare LEU fabrication plant** in Bosco Marengo, Italy, the operator has finished the repackaging of the low enriched and natural uranium oxide which remained in the installation after fabrication activities were stopped. The material was verified and sealed; it will be kept contained for a long period of time.

At the **FBFC LEU fabrication plant Romans**, France, a systematic error was discovered in the declared tare weights of uranium powders shipped to FBFC in Dessel, Belgium. The accountancy declarations have since been corrected accordingly.

Following evaluation, satisfactory explanations were also found for a series of positive MUF values at the **FBFC LEU fabrication plant** at **Dessel** in Belgium.

Nuclear Power and Research Reactors[19]***, other installations and facilities***

The formal status of Unit 1 of the **Gundremmingen** power plant in Germany was changed from closed down to decommissioned as was the status of the **Zwentendorf project** in Austria, which was abandoned before Austria became an EU member. Both power plants are

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[18] At LEU Fuel Fabrication Plants, fuel assemblies are produced from low enriched uranium (LEU) for subsequent use in nuclear power plants. In HEU Fuel Fabrication Plants, fuel elements for research reactors that use high-enriched uranium (HEU) are manufactured.

[19] Most of the nuclear power reactors operated in the European Union are of the Light Water Reactor type (LWR), i.e. the reactors are cooled and moderated with normal water. In addition, the UK operates MAGNOX and Advanced Gas Cooled Reactors (AGR) which are moderated with graphite and cooled with CO2 gas. The operation of LWRs using LEU is characterised by long periods (12-18 months) of continuous operation. These periods, when the in-core fuel is inaccessible, are followed by outages typically lasting 2-4 weeks when about one third of the (used) core fuel is exchanged for fresh fuel from Fuel Fabrication Plants. LWRs are inspected during this outage period when all the fuel is accessible for verification.

still being decommissioned but inspection visits confirmed that massive reconstruction would be needed before the plants could be made usable.

Initiatives are underway to remove the **Dodewaard** reactor in the Netherlands from the list of safeguarded plants, the remaining action being the final shutdown of the facility and the subsequent shipments of the remaining nuclear material, accompanied by the necessary inspections.

During a check of the spent fuel pond at the **Oskarshamn Power Plant** in Sweden the operator found that a fuel rod appeared to be missing from a storage cassette. The matter was treated seriously and it took concurrent investigations by the Commission and the IAEA to clarify the situation which goes back to the time before Sweden joined the EU.

In **Finland** the start of inspection work in two power plants was delayed because of plant security not accepting the inspector's passport as a valid document. In both cases, the matter could only be resolved by negotiation and through the intervention of the Finnish State Authority (STUK). Inspectors also experienced difficulties in gaining access to facilities in **France** where an operator's health physics service refused to accept the inspector's radiation protection passport, even though it was properly in order and up to date.

Operators' uncertainty with respect to the progress/handling of verification requests led to growing pressure for clarification. This was specifically felt in plants in Belgium: **Doel, Tihange,** and **Belgonucléaire**.

At the **BR2 reactor** in Mol, Belgium, an Advanced Thermal Power monitor was installed by the IAEA to verify the declaration of the operating history and guarantee the absence of undeclared production of plutonium. The BR2 reactor is the first research reactor in the EU to be equipped with such a monitor. The device is still being tested.

Inspections to verify **the transfer of spent fuel to CASTOR casks** continued to be of particular concern. In view of the envisaged medium to long term storage of these containers at reactor sites in **Germany, Belgium and Spain**, their contents were measured by DG TREN I before loading and subsequently brought under multiple containment and surveillance systems. Due to recurring technical problems during the loading, drying and closing of the CASTOR flasks, inspections proved to be difficult to plan. As the above countries have to empty their reactor ponds for operational purposes, these activities required more human resources than expected.

A new store for spent fuel and plutonium (MAGENTA) is to be constructed at **Cadarache** in France and is expected to be operational in 2009. The French authorities and the plants' management presented the project to the Commission at an early stage in order to allow DG TREN's requirements to be met.

Anticipating the entry into force of the Additional Protocol, the IAEA insisted on visiting a large number of locations containing small quantities of nuclear material (**Locations Outside Facilities - LOF**). This caused a substantial additional inspection burden for DG TREN. However, on occasions these inspections led to unexpected findings, for example at the University of Vienna a small sample of highly enriched uranium, which had not been recorded as such, was found.

Material Balance Evaluation of Bulk-Handling Facilities

In bulk handling facilities (Conversion Plants, Enrichment Plants, Fuel Fabrication Plants, and, Reprocessing Plants) nuclear material is mostly processed in loose forms, such as powders or liquids. Measurement uncertainties and particularities of the process lead to differences between the book inventory and the physical reality (known as **M**aterial **U**naccounted **F**or, MUF). The MUF is established at the operator's own annual physical inventory taking. It is verified by the inspectors of DG TREN, who do their own verifications and measurements.

In 2003, the Material Balance Evaluation focused on

- the evaluation of differences between operators' declarations and inspectors' measurement results obtained by Destructive Analysis (DA),
- evaluation of the MUF declared by the facility,
- evaluation of the cumulative MUF, which is the algebraic sum of the MUF for a Material Balance Area (MBA) over time, and
- Shipper-Receiver Differences (SRD)[20].

The entire evaluation of MUF, cumulative MUF and SRD was based on data collected from the Euratom Safeguards accountancy database which means that the French bulk-handling MBAs for which no declarations exist were excluded from the evaluation. Small bulk-handling MBAs with a physical ending or a throughput less than two significant quantities[21], as well as those plants decommissioned in 2003, were excluded from the evaluation.

No evidence was found to suggest that, in the bulk-handling facilities of the EU, source materials or special fissile materials were diverted from their intended uses as declared by the operators. It found that, without exception, operators' measurement systems comply with the most recent international standards. Nevertheless, some problems were revealed. At the large BNFL uranium conversion and fuel fabrication plant at Springfields in the UK, the MUF cannot be explained by measurement uncertainties alone. In addition, there was still evidence of biases in the cumulative MUF for some bulk-handling facilities, which have to be further investigated to identify the required corrective actions.

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[20] 'Shipper-Receiver Difference' means the difference between the quantity of nuclear material in a batch as stated by the shipping material balance area and as measured at the receiving material balance area.

[21] Significant quantities are used in establishing the quantity component of the safeguards inspection goal, e.g. 8 kg plutonium, 25 kg high enriched uranium and 75 kg low enriched uranium.

ANNEX 4

CO-OPERATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY

The IAEA Safeguards Implementation Report (SIR)

The SIR 2002 concluded that there was no evidence of diversion of nuclear material or misuse of equipment or facilities placed under safeguards in the European Union.

The SIR 2002 acknowledged that collaboration with Euratom and Member State support programmes made it possible to achieve significant advances in safeguards technology and verification procedures. Trials were carried out in various EU installations in the areas of surveillance systems, short notice random inspections, and remote monitoring, as were field tests on implementing the Additional Protocol (research centres in Finland and in the Netherlands). A workplan for Flowsheet Verification (FSV) of neptunium was discussed and agreed with the ITU at Karlsruhe and the implementation of FSV measures is expected to begin shortly.

In line with the New Partnership Approach arrangements and in order to save resources, the IAEA and Euratom Safeguards continued to share the purchase, operational and maintenance costs of equipment installed in facilities under IAEA safeguards.

A seminar on the New Partnership Approach, jointly developed by the Agency and Euratom, was held in Vienna. Many of the IAEA's routine training courses were attended by inspectors from DG TREN and conversely, IAEA inspectors attended courses given by DG TREN, thus maintaining cooperation on training.

In addition to its global conclusions, the SIR 2002 made recommendations for improvement in specific areas. These recommendations may be summarised as follows:

- Problems occurred when nuclear material remained in closed shipping containers at reactors over long periods. The practicalities of extending the area under surveillance and of sealing the shipping containers before their removal are being investigated.

- The issue of verifying that there has been no undeclared production of plutonium in the EU's three large research reactors will be settled once power monitors are installed at the reactors concerned. Indeed, the first power monitor was installed in 2003 at the BR2 reactor in Belgium.

- Corrective actions need to be taken as soon as possible after a Containment and Surveillance (C/S) failure is detected. The IAEA intends to install a newer generation of C/S equipment, improve equipment reliability, and provide backup measures for C/S applied to reactor cores (particularly during open core periods).

Several meetings of Working Groups and the Liaison Committee took place to discuss these and other topics. Because the Euratom Safeguards Office underwent extensive reorganisation, which will lead to changes in the implementation of safeguards with the IAEA, the New Partnership Approach (NPA) arrangements need to be reviewed to reflect these changes and to seek new efficiency and enhanced cooperation. The IAEA has called for a meeting to discuss forthcoming changes and their potential impact.

Additional Protocol and integrated safeguards

The aim of the Additional Protocols is to increase the IAEA's capabilities to detect undeclared nuclear materials and activities in violation of the Non-Proliferation Treaty (NPT). In 2003, Euratom Safeguards continued to play a key role in preparing for the implementation of the Additional Protocol in the European Union, on issues such as harmonising and standardising reporting under the Additional Protocol[22], arrangements for users with small quantities of nuclear material for non-fuel cycle related activities and joint visits with the IAEA to confirm the status of decommissioned facilities. Dedicated reporting software[23], developed by the Commission, was supplied to all the Member States for trials. The conceptual work on site definitions, developed jointly by DG TREN H and the EU Member States, is now reflected in the revised IAEA Guidelines for reporting and can be considered as the international standard on site definition.

By the end of 2003, all EU Member States had ratified the Additional Protocol and the majority had put the corresponding implementing arrangements in place. In line with Annex III of the EU-NNWS (non-nuclear Weapons States) Additional Protocol, known as the "Side Letter", the Commission the Commission agreed to accept the transfer of certain activities which are the responsibility of the Member States. Provision for the acceding Member States to become parties to the EU-NNWS Additional Protocol[24] was made in close cooperation with the Commission's Legal Service and the IAEA.

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22 The implementation paper for the so-called Side Letter and non-Side Letter Member States has been merged as the differences turned out to be of only minor relevance.

23 CAPE, Commission Additional Protocol Editor.

24 The Additional Protocol does not provide for its own accession clause, but the Safeguards Agreement does.

ANNEX 5

RESOURCES

Budget Appropriations for Nuclear Safeguards

Article 174 of the Euratom Treaty specifically mentions the necessity to include appropriations in the Commission's budget for operational expenditure related to nuclear safeguards activity.

On this legal basis, safeguards activities are financed from two types of budget appropriations:

- A general "administrative" appropriation involving the costs of Euratom Safeguards overheads such as general IT equipment, telecommunications, etc. (Part A of the Budget, chapters A-70 and A-24), as well as a specific appropriation for the medical survey and the radiation protection of the inspectors (Part A of the Budget, line A-1420);

- Specific "operational" appropriations allocated for expenditure directly related to nuclear safeguards such as mission costs, rental of offices on site (including on site laboratories), purchase of technical equipment and samples taking and analysis, contracts for services (i.e. maintenance and repairs), transportation of equipment and samples, training, etc., necessary for Euratom Safeguards activities (Part B of the Budget, chapter B4-20).

For 2003, specific operational appropriations in the EU budget for Euratom Safeguards came to €18.8 million. Of that amount, €13 million (70%) was actually committed. The expenditure was broken down as follows:

• Inspection mission costs (travel, daily allowances)	€3.8m	(29.2%)
• Rental of offices for the inspectors on inspected sites (and related equipment costs)	€0.5m	(3.8%)
• Purchase, installation, maintenance and repair of equipment on site, including IT, analysis of samples, and related costs such as transport, consumables, spare parts, etc.	€2.0m	(15.4%)
• Investments made in large scale plutonium bulk handling plants and related maintenance, operation and logistics	€6.0m	(46.2%)
• Administrative and technical assistance, training for inspectors, and other expenses (including special insurance coverage)	€0.7m	(5.4%)

Staff Resources and Utilisation

As of 31 December 2003, 95 officials were working in Directorate H (Nuclear Safety and Security), and 189 officials in Directorate I (Nuclear Inspection). In addition, the office of the deputy Director General, charged with the coordination of nuclear matters, comprised 5 persons. In addition, a total of 13 officials of Directorate A in Luxembourg were allocated to a number of administrative tasks related to both Directorates.

Thus, an overall total of 302 officials were working in the field of nuclear safety and security, of which 182 were Nuclear Inspectors.

In addition, the work of both Directorates was supported by a total of 19 external personnel.

ANNEX 6

Table 1 - Quantities of nuclear material under Euratom safeguards (t)

	End 1990	End 1995	End 2001[1)]	End 2002[1)]	End 2003[1)]
Plutonium	203	406	548	569	590
Uranium					
Total	200 400	269 100	314 610	318 710	325 510
HEU[2)]	13	11	10	10	10
LEU[3)]	32 000	46 700	57 000	58 500	59 700
NU[4)]	44 000	51 400	52 700	47 700	42 600
DU[5)]	124 400	171 000	204 900	212 500	223 200
Thorium	2 600	4 600	4 500	4 500	4 400

1) Quantities based on final reported data

2) High enriched uranium

3) Low enriched uranium

4) Natural uranium

5) Depleted uranium

Table 2 - Inspection activities of Euratom Safeguards

Person days of inspection in:	1999	2000	2001	2002	2003
Non-Nuclear Weapon States	2412	2113	2328	2348	1990
France	3492	3426	2934	2539	2266
UK	2871	2895	2399	2404	2110
Total	8775	8434	7661	7291	6366

Table 3 – Euratom Safeguards budget 2003

Expenditure committed for the specific appropriations

Table 3A: Line B4-2000

Safeguard inspections, training and retraining of inspectors

Topics	Expenditure (€ '000)
a) Studies, convocation of experts, publications	50
b) Mission costs	3,744
c) Transportation for staff and equipment	640
d) Rental of offices and special services on sites	456
e) Internships and training	30
f) Special insurance	40
TOTAL	**4,960 (out of 5,700)**

Table 3B: Line B4-2020

Sampling and analyses, equipment, specific work, provision of services and transport

Topics	Expenditure (€ '000)
a) Administrative and technical assistance	135
b) Purchase of surveillance equipment	463
c) Purchase of measurement equipment	118
d) Purchase of equipment for seals	
e) Purchase and maintenance of computing equipment directly linked to inspections	109
f) Costs for destructive analysis	
g) Equipment spares, repairs, accessories and maintenance	282
h) Consumable items, purchase of sources, transport of radioactive materials	47
i) Monitoring (warning system based in Luxembourg)	52
j) Software (accountancy program, management and firewall)	794
TOTAL	**2,000 (out of 5,500)**

Table 3C:

Line B4-2021: Specific safeguards for large-scale plutonium processing plants

Topics	Expenditure (€ '000)
a) Sellafield – BNFL (THORP, MOX)	294
b) La Hague – COGEMA (UP3, UP2)	205
c) Cadarache – COGEMA	10
d) Marcoule – MELOX	30
e) Dessel – BELGONUCLEAIRE	15
f) On site laboratories (initial investments and operations)	3,563
g) Software (on sites)	223
h) Maintenance & repairs (equipment, hardware and software support)	1,129
i) Software development (new applications, new equipment)	531
TOTAL	**6,000 (out of 7,400)**

Table 3D:

Line A0-1420: Health checks for staff exposed to radiation

Topics	Expenditure (€ '000)
a) Gamma spectrometry and toxicological analysis (non-standard)	5
b) Measurement equipment (dosimeters)	29
c) Maintenance and calibration	15
d) Material, services and other contamination controls	46
e) Mission costs (for body-counter)	35
f) Other running expenses	20
TOTAL	**150 (out of 215)**

Table 4 – DG TREN Safeguards budget 1991-2003 (€ million)

Evolution of expenditure for the specific budget appropriations

Budget Line	**1991**	**1995**	**2003**
Safeguard inspections, training and retraining of inspectors **(B4-2000)**	2.5	4.2	5.7
Sampling and analyses, equipment, specific work, provision of services and transport **(B4-2020)**	2.3	3.2	5.5
Specific safeguards for large-scale plutonium processing plants **(B4-2021)**	2.6	10	7.4
Health checks for staff exposed to radiation **(A0-1420)**	0.1	0.3	0.2
TOTAL	**7.5**	**17.7***	**18.8**

*In addition, €1.8 million was spent on cooperation with Russia.